

## WHAT IS CLAIMED IS:

1. A communications system comprising:  
a switch for accepting incoming calls;  
5 a plurality of telephony access nodes for terminating said incoming calls;  
a distributed redirect server hosted on each of said plurality of telephony access nodes; and  
a load balancing unit for directing said  
10 incoming calls from said switch to one of the plurality of telephony access nodes, said plurality of telephony access nodes being connected to a back end cluster.
2. A communications system according to claim 1  
15 wherein the distributed redirect server determines whether one of said plurality of telephony access nodes has sufficient resources to terminate one of said incoming calls.
- 20 3. A communications system according to claim 1 wherein the connection between the plurality of telephony access nodes and the cluster of back end nodes uses Internet Protocol.
- 25 4. A method of terminating a call in a communications system, said communications system comprising a switch, a plurality of telephony access nodes, a distributed redirect server, and a load  
balancing unit, the method comprising the steps of:  
30 generating an incoming call at said switch;  
directing said incoming call from said switch  
via said load balancing unit to said distributed  
redirect server for termination at one of said  
telephony access nodes;  
35 verifying, at said distributed redirect server, whether said one telephony access node has sufficient

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resources to answer said incoming call; and  
terminating said incoming call at said one  
telephony access node.

5           5:       A method of terminating a call in a  
communications system, said communications system  
comprising a switch, a plurality of telephony access  
nodes, a distributed redirect server, and a load  
balancing unit, the method comprising the steps of:  
10           generating an incoming call at said switch;  
             directing said incoming call from said load  
balancing unit to said distributed redirect server for  
termination at a first one of said telephony access  
nodes;  
15           verifying, at said distributed redirect server,  
whether said first telephony access node has sufficient  
resources to answer said incoming call;  
             determining whether a second one of said  
telephony access nodes has sufficient resources to  
20           answer said incoming call when said step of verifying  
has concluded that said first telephony access node  
does not have sufficient resources to answer said  
incoming call;  
             sending a message from said second telephony  
25           access node to said switch indicating the ability of  
said second telephony access node to terminate said  
incoming call;  
             sending a message from said switch directly to  
the distributed redirect server associated with said  
30           second telephony access node; and  
             terminating said incoming call at said second  
telephony access node.

6.       A method according to claim 5 wherein, prior to  
35       said determining step, a status of each of said

telephony access nodes is multicast to the others of said telephony access nodes.

5           7.       A method according to claim 5 wherein said step of determining comprises a step of consulting a resource availability status map which indicates the status of each of said telephony access nodes.

10           8.       A method according to claim 7 wherein said resource availability status map is compiled based on Internet Protocol multicast messages sent by each one of said plurality of telephony access nodes.

15           9.       A method according to claim 7 wherein each one of said telephony access nodes has a status of either Free or Idle.

20           10.      A method according to claim 7 wherein said resource availability status map is maintained at each of said telephony access nodes.

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